OPTIMIZATIONS FOR LIVE EVENT, REAL-TIME, 3D OBJECT TRACKING

Abstract

During a sporting or similar event, participants and objects are automatically tracked using a scalable matrix of fixed, non-adjustable overhead cameras that form a view of the entire performance area. The participants and objects are identified with attached visible or non-visible markers that are detected using image analysis. A real-time database of two-dimensional movement locations is created from the resulting information, which is then used to automatically direct multiple fixed, adjustable side-view cameras for capturing and recording the event. Image analysis of this side-view video detects additional markers providing a three-dimensional model of the participants and objects.